

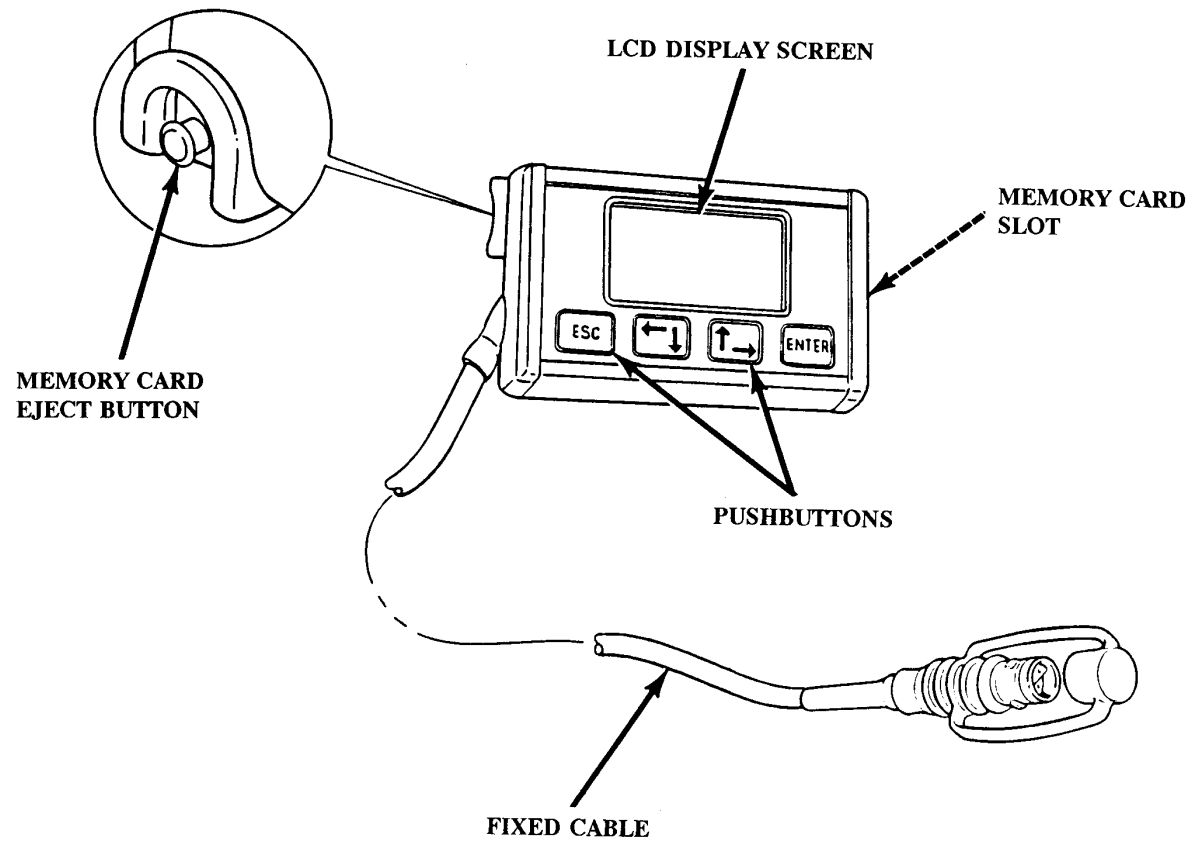
# **REASON**

- **To achieve realistic and effective training with TWGSS, tank crews must be able to correctly start, align, and verify alignment of TWGSS to the tank's FCS.**

# **TRAINING OBJECTIVE**

- **Given an operational M1A2 tank with TWGSS installed and prepare-to-fire checks and boresighting completed, the crew will perform the following tasks:**
  - **Conduct system start-up IAW TM 9-6920-709-12&P-1-2**
  - **Conduct system alignment IAW TM 9-6920-709-12&P-1-2**
  - **Perform alignment verification**

# CONTROL PANEL



# **CONTROL PANEL FUNCTIONS**

- **Monitor ammunition and ammunition upload**
- **Result presentation: numerical/ graphic**
- **System alignment**
- **BIT and error presentation**
- **Controller functions**
- **Data storage on TDRS memory card**

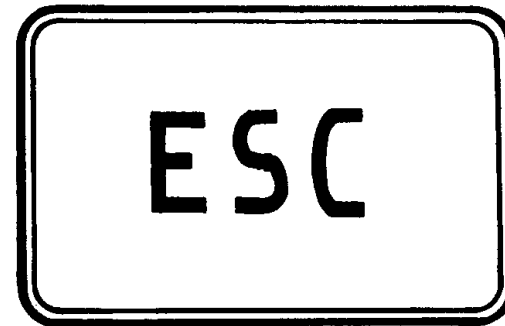
# CONTROL PANEL MENU

F	SF	SF	SF	SF	SF	SF	SF
F	TTTTTTTTTTTTTTTTTTTTTTTTTT						
F	TTTTTTTTTTTTTTTTTTTTTTTTTT						
F	TTTTTTTTTTTTTTTTTTTTTTTTTT						
F	TTTTTTTTTTTTTTTTTTTTTTTTTT						
F	SSSSSSSSSSSSSSSSSSSSSSSS						

F = MAIN FUNCTION GROUP  
SF = SUB-FUNCTION GROUP  
T = TEXT AREA  
S = SELECTION TITLE

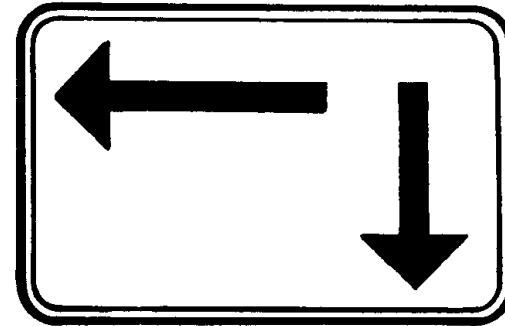
# PUSHBUTTON FUNCTIONS

- **ENTER**
  - Access to menus
  - Saves/accepts data
- **ESC**
  - Aborts menu
  - Inhibits function/selection

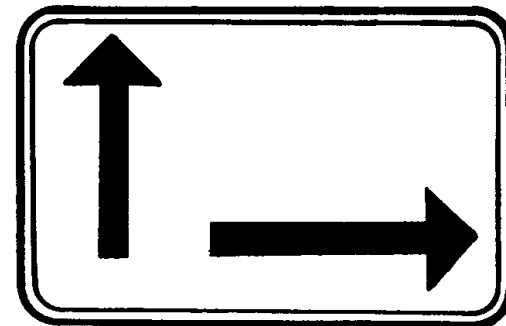


# PUSHBUTTON FUNCTIONS

- **DOWN/LEFT**
  - Moves cursor down or left
  - Decreases values for data



- **UP/RIGHT**
  - Moves cursor up or right
  - Increases values for data



# **STARTUP PROCEDURE**

- **Set GTD switch to MANUAL**
- **Switch on vehicle master power**
- **Switch on turret power**
- **Check for FCS malfunctions on CID**
- **Switch on utility power**
  - **Select PRE/POST**
  - **Select AUX SYSTEMS**
  - **Switch on utility power**



# BIT INDICATIONS

- **Control panel indication (pop-up screen)**
- **Sound indication on tank intercom**
- **Visual indications in hit indicators**

SI	RM	GD	LF				
AL	NO CONNECTION TRANSCIVER UNIT						
SU							
TE							
CF							
	REMAINING AMMO.						

# **TROUBLESHOOTING PROCEDURE**

- **Consult manual**

## **WARNING**

**Do NOT disconnect/connect cables with vehicle master power switch in ON position:**

- **Damage can occur to TWGSS or tank**
- **Main gun/turret could move suddenly and injure personnel**

# **ALIGNMENT**

- **Alignment is the process where TWGSS is aligned to the tank's FCS.**

# **TANK SETTING DURING ALIGNMENT**

- **Boresighted and operational tank with TWGSS installed**
- **1200 m entered into FCS and boresight GPS selected**
- **Reticle aiming point of GPS/day and GPS/thermal**
- **Boresight cross of GAS**

# **TWGSS ALIGNMENTS**

- **Cant alignment**
- **Laser alignment**
- **TBOS for GAS**
- **TBOS alignment for GPS day mode**
- **TBOS alignment for GPS thermal mode**

# **SUMMARY**

- **Startup procedures**
- **System alignment**
- **Alignment verification**

## **CLOSING STATEMENT**

- **To achieve the desired training result with TWGSS, you must be able to correctly conduct startup, system alignment, and alignment verification of TWGSS to the tank FCS.**